



UNITED STATES DEPARTMENT OF DEFENSE

REPI

READINESS AND ENVIRONMENTAL
PROTECTION INTEGRATION PROGRAM



REPI AND MILITARY INSTALLATION RESILIENCE

Congress amended 10 U.S. Code (U.S.C.) § 2684a in the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year (FY) 2021 to address military installation resilience as a stand alone statutory justification for the REPI Program. The expanded authority granted under 10 U.S.C. § 2684a(a)(2)(B)(ii) allows for REPI projects to engage in activities to protect Department of Defense (DoD) installation and range operations and infrastructure from predicted or unexpected environmental conditions such as flooding, drought, or wildfire.

The REPI Program interprets the Title 10 definition of military installation resilience to focus on projects designed to promote resilience activities that protect, restore, and enhance off-base natural infrastructure and sustain military mission capabilities. Natural infrastructure solutions, such as wildfire risk mitigation, living shoreline

construction, or habitat restoration, can help installations prevent, prepare for, and recover from anticipated or unanticipated changes in environmental conditions.

Military installation resilience is defined in [10 U.S.C. § 101\(e\)\(8\)](#) as:

“the capability of a military installation to avoid, prepare for, minimize the effect of, adapt to, and recover from extreme weather events, or from anticipated or unanticipated changes in environmental conditions, that do, or have the potential to, adversely affect the military installation or essential transportation, logistical, or other necessary resources outside of the military installation that are necessary in order to maintain, improve, or rapidly reestablish installation mission assurance and mission-essential functions.”

WHAT ARE “ENVIRONMENTAL CONDITIONS”?



**SEA LEVEL RISE AND
RECURRING FLOODING**



**INCREASED DROUGHT
CONDITIONS**



EXTREME WEATHER



**INCREASED
WILDFIRES**



**INLAND
FLOODING**



**INCREASED
PRECIPITATION**



**IMPACTS ON
PROTECTED SPECIES
OR HABITAT**



**THAWING
PERMAFROST**

Read more about the impacts of environmental conditions at www.REPI.mil/Resilience.

When executing a resilience project, installations may also leverage the Sikes Act (16 U.S.C. § 670c-1), a complementary authority governing DoD management of natural resources. The Sikes Act allows the Military Services to enter into cooperative agreements for the management of natural resources both on and off installations to “relieve or eliminate current or anticipated challenges that could restrict, impede, or otherwise interfere with, whether directly or indirectly, current or anticipated military activities” (16 U.S.C. § 670c-1(a)(2)).

Within this statutory framework, the REPI Program is exploring new opportunities to protect range assets and capabilities through enhanced installation resilience. Several DoD installations are using the resilience authority

to preserve coastal wetlands, mangroves, and oyster reefs to reduce storm surge and flooding; manage forest lands to reduce wildfire risks to infrastructure; and protect upstream water resources to minimize likelihood of drought and consequent constraints on installation missions. REPI projects to promote military installation resilience must meet the applicable requirements of 10 U.S.C. § 2684a and support installation training, testing, and operations.

COMPLEMENTARY RESILIENCE PROGRAMS

In addition to the REPI Program, there are several other programs and awards focused on improving resilience. Please visit www.REPI.mil/Resilience to learn more about resilience programs offered by other federal agencies and non-governmental organizations.



RESILIENCE SUCCESS STORIES

Installations across the country are leveraging the 10 U.S.C. § 2684a authority to address climate change impacts and protect mission priorities.

NAVAL WEAPONS STATION

EARLE, NEW JERSEY:

Enhancing Readiness and Building Resilience to Extreme Weather and Water Shortages



After Hurricane Sandy struck the New Jersey coastline in 2012, Naval Weapons Station (NWS) Earle and the surrounding community sustained catastrophic damage that cost roughly \$50 million to repair. To mitigate future costs from storm damage, NWS Earle—the Navy base tasked with providing ordnance for all Atlantic Fleet Carrier and Expeditionary Strike Groups—is now leveraging the expanded 10 U.S.C. § 2684a authority to improve installation resilience. In partnership with Monmouth County, NWS Earle is preserving wetlands, coastal buffer areas, groundwater recharge zones, and land around the local reservoir to prevent future damage from storm surges and protect the community's drinking water sources.

To complement these efforts, NWS Earle and a consortium of DoD installations and ranges were awarded \$2 million through the 2020 REPI Challenge to fund a new intergovernmental support agreement under 10 U.S.C. § 2679 with the State of New Jersey. The agreement and funding support beach nourishment, living shoreline establishment, storm surge protection, stormwater management and storage capacity enhancement, and wildfire mitigation. By improving and maintaining New Jersey's coastal and inland waterways, this project will enhance the resilience of the DoD installations and ranges and their communities.

FORT HUACHUCA, ARIZONA:

Wildfire Risk Reduction and Water Security Through Resilience Partnerships



Located in the Sonoran Desert, Fort Huachuca is home to premier restricted military airspace for unmanned aircraft system training in the Western United States and the Buffalo Soldier Electronic Test Range and electromagnetic complex, supporting training for U.S. Army, Air Force, Marine Corps, and Border Control personnel. Historically, this installation was considered remote; however, an increase in urban

sprawl, electronic interference, dangerous wildfires, and drought has stressed the installation's water supply and overall mission.

To improve Fort Huachuca's groundwater resilience to drought and overdraft, the Arizona Land and Water Trust conducted a Water Supply and Use Assessment pilot on the 1,150-acre Rose Tree Ranch. The assessment included an analysis of groundwater levels and surface flows, a survey of current irrigation and water use, and a comprehensive review of historic pumping records and water rights. It provided several recommendations to address groundwater deficits in the Upper San Pedro Basin, which will strengthen water security for Fort Huachuca and the surrounding communities.

In 2020, Fort Huachuca was awarded over \$2 million in REPI Challenge funding to protect more than 2,000 acres of working ranches and forests and mitigate wildfire risk. Portions of this land will contribute to existing hazardous fuels reduction projects occurring in adjacent forests, including U.S. Forest Service lands used for important testing activities.

MARINE CORPS

AIR STATION CHERRY

POINT, NORTH CAROLINA:

Building a Living Shoreline to Protect Mission Readiness



Marine Corps Air Station (MCAS) Cherry Point, the Marine Corps' largest air station, is situated on the coast of eastern North Carolina at the mouth of the Neuse River, adjacent to the Pamlico Sound—an area threatened by erosion, storm-related flooding, and saltwater intrusion. These threats directly impact the combined electronic and special warfare training and operational capabilities of MCAS Cherry Point, Piney Island Bombing Range, and Brant Shoal Bombing Range.

To mitigate these threats, the North Carolina Sentinel Landscape Committee and North Carolina Coastal Federation were awarded \$1 million in 2020 REPI Challenge funding to build a living shoreline along the Neuse River to curtail erosion, promote ecosystem health, provide water quality benefits to the public, and enhance installation resilience at MCAS Cherry Point. This living shoreline will protect 2,100 linear feet of eroding shoreline using REPI Challenge funds and an additional 5,600 linear feet through hurricane recovery commitments, contributing to the strategic goals of the Eastern North Carolina Sentinel Landscape and improving the resilience of MCAS Cherry Point.